

EPA Region 9 Superfund EUREKA SMELTERS SITE

DECEMBER 2015



Snapshot

Contamination: High levels of lead and arsenic in soils/slag piles

Residential yards cleaned up to date: 43

Residential yards requiring clean up: ~227

Cleanup costs to date: \$5 Million

Future cleanup costs (complete cleanup):
Approximately \$28 Million



EPA in Eureka

Since 2012, the US EPA Emergency Response Program has conducted removal assessments at more than 215 of the approximately 400 residential parcels in Eureka. EPA has also conducted removal assessments at large slag piles and undeveloped parcels located within the foot prints of the former smelter and mill sites. Findings show some of the highest levels of lead concentrations in soils found anywhere in EPA Region 9, prompting action by EPA. The maximum residential lead soil concentration is over 100,000 ppm, which exceeds the residential site-specific value (425 ppm) by more than a factor of 235 times. Residents, especially young children, experience current and ongoing exposure to this contamination.

In 2013 and 2014, EPA conducted removal actions at forty-three residential properties with the highest levels of lead (>3,000 ppm) and arsenic (>600 ppm) soil contamination. The removal action consisted of removing the top one foot of soil from residential yards, placing barrier tape, and backfilling with clean soil.

Proposed Future Work

Residential Properties

EPA has identified three tiers of residential properties based on contaminant levels, Tier I being the most contaminated. EPA proposes yard removals at a total of approximately 227 properties in all three tiers to reduce exposure scenarios.

Estimated cost: ~ \$21 Million

Slag piles

There are two large slag piles (each about 3 acres) and two much smaller slag piles located in Eureka and immediately surrounded by residences. Levels of lead exceed 44,000 ppm and levels of arsenic exceed 25,000 ppm in these slag piles. EPA recommends consolidation and soil capping of the slag piles.

Estimated cost: ~ \$3.5 Million

Undeveloped Parcels

There are four large undeveloped parcels (total area of about 20 acres) located within the footprint of the former mill and smelter sites. Lead and arsenic soil concentrations have been identified

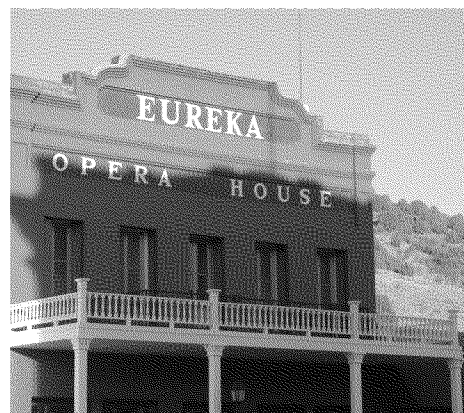
at these parcels in excess of 100,000 ppm and 32,000 ppm, respectively. EPA recommends capping these areas with one foot of rock.

Estimated cost: ~ \$4.2 Million

Disposal

EPA recommends construction of a repository within the Town of Eureka. Eureka County has recently purchased a parcel intended to be used for this purpose.

Estimated cost: \$500,000 (included in residential properties estimate of \$20,986,000)



History

Between 1866 and 1910, mining of silver and lead took place throughout the Ruby Hill area, located about two miles west of Eureka, NV. During this period, over one-million tons of ore were extracted from Ruby Hill, primarily by the Eureka Consolidated Mining Company and Richmond Consolidated Mining Company. The ore mined from Ruby Hill was then transported via railcar to various milling and smelter operations historically located within the current boundaries of the Town of Eureka. As many as sixteen smelters are reported to have operated within Eureka. The lead and arsenic contamination found in Eureka is a result of these historic smelting activities.

Historic documents report the following

"Furnaces poured forth dense clouds of black smoke which constantly rolled over the Town and deposited soot, scales and black dust everywhere, giving the Town a somewhat somber aspect and killing vegetation. The 'Pittsburgh of the West,' Eureka was indeed the foremost smelting district in the entire West."

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Timeframe: 3-4 Field Seasons (Complete funding)

With complete funding, EPA's proposed work could be completed over the course of three to four field seasons. Due to the high cost of mobilizing equipment and personnel to Eureka, costs may be higher if work is conducted over a longer period of time.

- First Priority: Residential Property Cleanup and Repository
- Second Priority: Undeveloped Areas Capping
- Third Priority: Slag Piles Capping

Nevada Projects

Working with the Community

The Eureka County Commissioners appointed a community working group to collaborate with EPA during the creation of the Engineering Evaluation and Cost Analysis (EE/CA), a document that evaluates the potential cleanup alternatives based on feasibility and cost. The group met several times with EPA in 2014 and 2015 to provide community input on the document during development. The result of this collaboration is a draft-final document generally supported by community representatives. In a community meeting held on November 2nd, 2015, EPA presented the proposed cleanup options (outlined above) to residents, members of the committee, and the Eureka County Commissioners. A public comment period is open on the document until December 15, 2015.

